

REMARKS

Claims 1 and 3-6 are pending in the instant application. Claim 1 is objected to for including a minor typographical error. Claims 1 and 3-6 stand rejected under 35 USC § 112, first paragraph as failing to comply with the written description requirement. Claims 1 and 3-6 stand rejected under 35 USC § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 3-6 stand rejected under 35 USC § 102 (b) as being anticipated by Axelsson et al. (WO 00/071166 and its US equivalent US 6,872,380). The application has been amended. The claims have been amended. More specifically, claim 1 has been amended to correct a minor typographical error and to delete certain unnecessary reference numbers. Applicant respectfully submits that none of the amendments constitute new matter in contravention of 35 U.S.C. §132. Reconsideration is respectfully requested.

Claim 1 is objected to for including a minor typographical error. Applicant submits that this objection stands obviated in view of the amendments to claim 1 hereinabove. Reconsideration and withdrawal of the objection are respectfully requested.

Claims 1 and 3-6 stand rejected under 35 USC § 112, first paragraph as failing to comply with the written description requirement. This rejection is respectfully traversed.

The specification refers to suitable substrate compounds which may be used in the claimed method to be hydrogenated with para-hydrogen enriched hydrogen as those found in WO 99/24080. The Examiner states that incorporation in the specification by reference to an unpublished U.S. application, foreign application or patent is improper. Applicant respectfully would like to point out that the international publication date of WO 99/24080 is May 20, 1999 which is about three years prior to the present application's priority date (August 29, 2002). Hence the specification includes a reference to a published PCT application (with the US being a designated state) in English language. WO 99/24080 entered the national phase from the PCT in the US and resulted in granted US patent number

6,574,495. Applicant has amended the specification referring for the first time to WO 99/24080 by including the term “now issued as United States Patent No. 6,574,495 on June 03, 2003”. In view of this amendment, Applicant respectfully submits that the rejection stands obviated. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1 and 3-6 stand rejected under 35 USC § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is respectfully traversed.

Claim 1 contains numbers in parenthesis which refer to figures in the specification. Applicant has deleted these numbers as suggested by the Examiner and thus believes that this particular rejection stands obviated.

Further, claim 1 is considered to be confusing because it is unclear what the minimum number of required pulses may be. Applicant respectfully disagrees. The claim clearly states that after placing the contrast agent in a magnetic field on the order of the earth magnetic field, a first pulse is applied which is followed by one or more further subsequent pulses wherein 2 subsequent pulses differ in at least one of the parameters: magnetic field strength, orientation or duration. Hence if the first pulse is followed by only one further pulse, i.e. a second pulse, said first and second pulse differ in at least one of the parameters: magnetic field strength, orientation or duration. Only one further pulse would thus result in a minimum total of 2 pulses, as the Examiner herself correctly states. If the first pulse is followed by more than one further subsequent pulse, e.g. by 2 subsequent pulses, i.e. a second and a third pulse, pulse 1 and 2 would be two subsequent pulses which differ in at least one of the parameters: magnetic field strength, orientation or duration and pulse 2 and 3 would be two subsequent pulses which differ in at least one of the parameters: magnetic field strength, orientation or duration. Apart from being clearly stated in claim 1, the particular exposing step is also explained in detail by the flowchart of figure 3 and the description of figure 3 in

the specification on page 10, lines 5 to page 11, line 8. Thus, Applicant respectfully submits that claim 1 is clear as written.

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claims 1 and 3-6 stand rejected under 35 USC § 102 (b) as being anticipated by Axelsson et al. (WO 00/071166 and its US equivalent US 6,872,380). This rejection is respectfully traversed.

The disclosure of Axelsson et al. is discussed in the present application, page 2, line 17 to page 3, line 8. Contrary to the claims of the present application, Axelsson et al. does not describe the use of pulses of magnetic fields in which two subsequent pulses differ in at least one of the parameters: magnetic field strength, orientation or duration. As apparent from Axelsson et al., column 3, lines 12-23 the magnetic field treatment disclosed by Axelsson et al. is effected by magnetic shielding or alternatively by passage of the hydrogenation mix (substrate, catalyst, solvent and para-hydrogen enriched hydrogen) through a twin μ -metal layer tube. Since Axelsson et al. do not disclose a magnetic field treatment which comprises the use of pulses of magnetic fields in which two subsequent pulses differ in at least one of the parameters: magnetic field strength, orientation or duration, i.e. features contained in the claims of the present application, claims 1 and 3-6 are novel in view of Axelsson et al. Withdrawal of the rejection under 35 USC § 102 (b) is thus respectfully requested.

Applicant would further like to point out that – as described in the present application on page 3, lines 3 to 8, – with the magnetic field treatment of claims 1 and 3-6 the degree of polarization of the MR contrast agent, especially the polarization of carbon atoms within the MR contrast agent produced according to the claimed method can be further increased. Axelsson et al. fail to disclose, teach, or suggest that such a further increase of polarization could be achieved the use of pulses of magnetic fields in which two subsequent pulses differ

in at least one of 3 specific parameters. Claims 1 and 3-6 are therefore patentably distinct over Axelsson et al. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1 and 3-6 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/526,240. This rejection is respectfully traversed.

Both the instant and referenced applications are related to increasing the polarization of a MR contrast agent produced by hydrogenation of a substrate compound with para-hydrogen enriched hydrogen by a magnetic field treatment. However, the way this magnetic field treatment is carried out during the exposing step is technically different and due to this technical difference, the claims are not obvious variants of one another. Therefore, as the present invention is patentably distinct from the reference, Applicant respectfully requests reconsideration and withdrawal of the rejection.

In view of the amendments and remarks hereinabove, Applicant respectfully submits that the instant application, including claims 1 and 3-6, is in condition for allowance. Favorable action thereon is respectfully requested.

Appl. No. 10/526,238
Amdt. Dated: February 10, 2009
Reply to Office action of August 14, 2008

Any question with respect to foregoing may be directed to Applicant's undersigned counsel at the telephone number below.

Respectfully submitted,

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